

THE MARINE REVIEW

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ADVOCATES REORGANIZATION.

"There is crying need for the reorganization of the whole navy department," is the declaration of *The Navy* in its October number, which is soon to be issued. This publication which for months has been vigorously denouncing defects in our fighting ships, makes a general attack on the bureaus responsible for construction of them.

Attention is called to the recent report of the Turret Board, which bore out charges made by *The Navy* as to dangerous conditions in turrets.

"Our criticisms have been attacked as being unpatriotic," *The Navy* goes on, "the point of view of these critics apparently being that if there are defects in the fleet, they should be concealed as far as possible from the public, in order that the department itself may quietly correct these defects and mistakes in construction and thus avoid a shock to the public confidence."

"This would, indeed, be a very good method, if it were reasonably reliable. But, as we have several times pointed out, it is not reliable."

"The first serious turret disaster—that on board the Massachusetts—did not suffice to bring about the plainly necessary changes in turret construction. The bureaus were deaf to the energetic protests of distinguished seagoing officers; and it is an interesting fact that one of the most emphatic of these protests was made to the department less than a week before the second great turret disaster—that on the Missouri. Our newest ships have turrets planned like those of the Missouri, with the addition of the automatic shutters which the Georgia accident proved to be inefficient."

"The principle of the interrupted ammunition hoist was embodied in the wooden battleships of a century ago; and there would seem to be no excuse

for our having to rediscover it at this late day.

"For two modern instances, we refer briefly to the recent steaming and gun trials of our two newest armored cruisers, the Washington and Tennessee. We do not intend to go into details of the reports of the board of inspection and survey on the condition of these two ships. Their hulls are well built, and their propelling machinery is generally efficient."

"But the reports of the board, composed of seagoing officers chosen for their practical experience in the handling of ships and guns, show that the general condition of these two cruisers, with regard to active service, is highly unsatisfactory. Most of the defects are not grave, each by itself, but the accumulation of minor defects shows that the construction bureaus have, even up to today disregarded the urgent wishes of ship-using officers."

"One defect, however, is so important as to deserve specific mention. The board of inspection and survey calculates the radius of action of these two new ships at 3,635 knots, which the board considers fatally inadequate. Neither ship has either torpedo tubes or fire control system."

"The four bureaus concerned with building ships build ships with far too little reference to the requirements of men who handle these ships. The bureaus have had before them for years past full information regarding foreign advances in warship construction—information supplied by the office of naval intelligence. The separation of turrets from handling rooms and the two-stage ammunition hoist have been before the bureau of ordnance and construction and repair for at least five years past."

"Yet in spite of this information, it is for the most part only after ships have been built and mistakes solidified

in steel that the seagoing officer has an official right to make his opinions known."

"Thus, in the case of turrets: Line officers have for years past made official protest against the present design, until now it is to be changed at a great outlay which might have been entirely avoided by correct design in the beginning. The faults reported by the board of inspection and survey of the Washington and Tennessee are likewise faults that have long been the subject of protest from line officers. But in this case, too, the bureaus made inexcusable mistakes which must now be corrected at increased cost and loss of time."

"Not all of the bureaus are equally at fault in these matters. Equipment and steam engineering, of course, have nothing to do with armor belts and turret designs. But the general system, as now in operation, is nevertheless lacking in efficiency. At one time or another a particular bureau will do excellent work, as ordnance is now doing in regard to guns and sights. But if a bureau, for any reason whatever lags behind, it can be overruled or brought up to the mark only by the interference of the civilian secretary or the civilian president."

"This is obviously a burden which should not be cast upon untechnical men, however intelligent. There is crying need for the reorganization of the whole navy department. Secretaries of the navy, one after another, for many years past, and many bureau chiefs along with them, have appealed to congress for remedial action. The system provided by congress has been twisted into a means of protecting conservatism and perpetuating inexcusable defects in our warships. It is time that congress stepped in to do away with this misuse of the machinery it has provided."

REPAIRS ON THE HERMAN WINTER.

A quick and satisfactory repair job was done on the steamer Herman

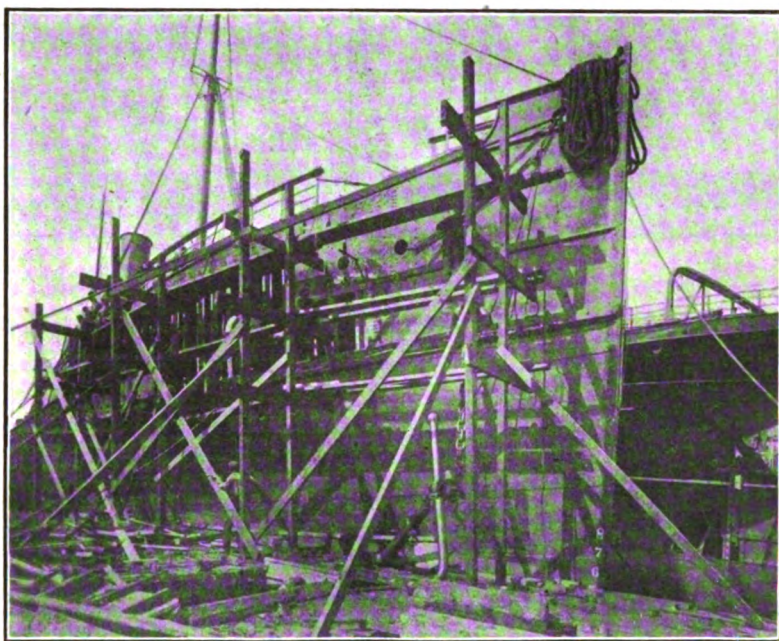
property the most important of which is the rigid examination of the engineer who is held responsible for any accident that may occur in his depart-

ment, and the captain was consulted on technical subjects entirely foreign to his station and training.

The captain is and probably always will be recognized as the supreme commander of the ship. He was trained in all the details of construction, navigation, and jurisdiction over the ship when the motive power was wind, but with the advent of steam a new department was created in the details of which he was not trained, consequently the necessity of a technical man in charge of that department was universally admitted.

When the individual marine engineer took charge of a ship and was denied what he considered the necessary equipment for the safe operation of that ship, the only refuge for him was the organization of his craftsmen, and securing through the power of that organization, the conditions required. The Marine Engineers' Beneficial Association organized in 1875 and operated with the same intelligent care, as the machinery of an ocean liner, is slowly but surely eliminating the grievances of the engineer.

The organization has examined the conditions on the Atlantic coast steamers, diagnosed them and prescribed a remedy which was presented to the line managers months in advance of the application, which begins Oct. 1, great injustice is often done a worthy



STEAMSHIP HERMAN WINTER OF THE METROPOLITAN STEAMSHIP CO.'S FLEET AS SHE APPEARED ON SEPT. 20 AT THE FORE RIVER SHIP BUILDING CO.'S PLANT AFTER HER COLLISION WITH THE SYLVIA.

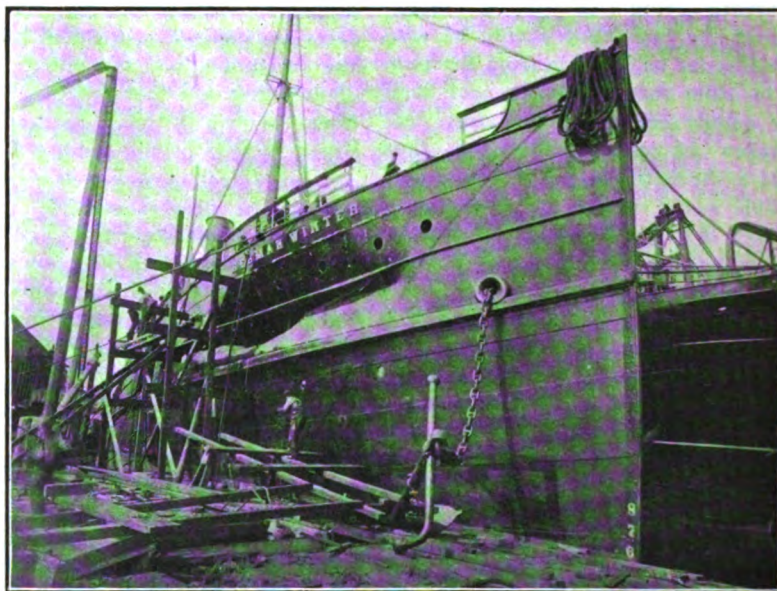
Winter at the Fore River shop. She arrived at Fore River in the late afternoon of Thursday, Sept. 19. The temporary wooden bulkhead, which covered the long gash on her starboard bow, due to her collision on August 18, with the Sylvia, was ripped off and the next day the work of putting in new frames, plates and planks was begun. In eight working days the repairs were finished, inside and out with no overtime or night work. Superintendent Constructor McGregor of the Metropolitan Steam Ship Co., visited the yard while the repair work was in progress. Chief Engineer F. D. Clark of the Herman Winter inspected the repair work. The steamship H. F. Dimock of the same company is now at this ship yard, where she will tie up for some time.

THE MARINE ENGINEER.

Editor MARINE REVIEW:—The movement of the marine engineers on the Atlantic coast to regulate their wages and working conditions has been harshly criticized in some quarters, and while not familiar with all the details of their grievances the recognized caliber and intelligence of men capable of operating modern steamships should be a sufficient guarantee that they exist. The danger of steam navigation is being minimized by governmental regulations for safeguarding life and

ment, which is rapidly becoming the most important on board ship.

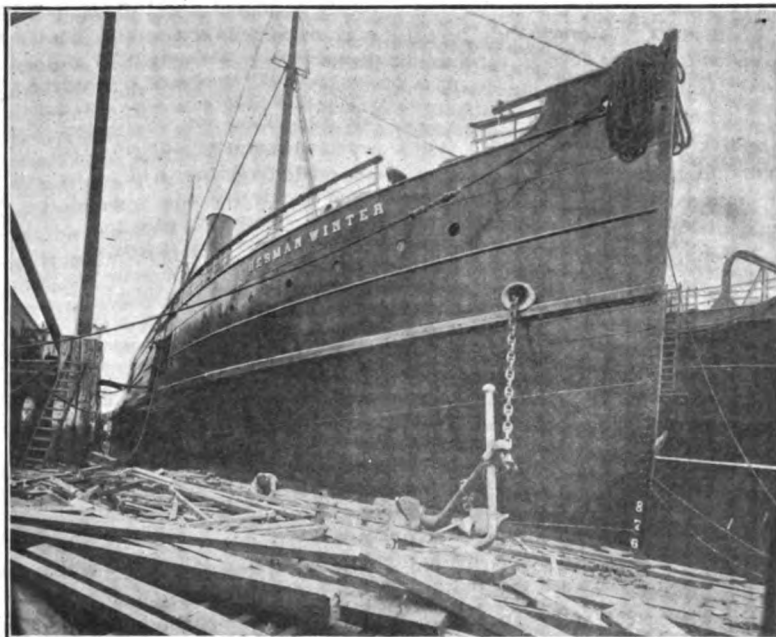
The salary of the marine engineer and the number of men necessary to operate steam vessels safely was to a



STEAMSHIP HERMAN WINTER WITH REPAIRS ALL FINISHED IN EIGHT WORKING DAYS, READY TO RESUME HER REGULAR SERVICE.

great extent determined by the manager of the line, or the ship owner, and great difference of opinion existed on these subjects. Economy was carried past the danger point despite the protests of the individual engi-

cause. By prejudging it without sufficient investigation, and charging the engineers with a desire to degrade the captain and tie up shipping, creating an antagonism where none exists. The engineer is as deeply interested



STEAMSHIP HERMAN WINTER ON SEPT. 24 SHOWING THE RAPID PROGRESS OF HER REPAIR WORK IN FOUR WORKING DAYS.

in the successful operation of the ship as the captain, manager or owner and the Atlantic Coast movement will be settled to the ultimate satisfaction of all concerned.

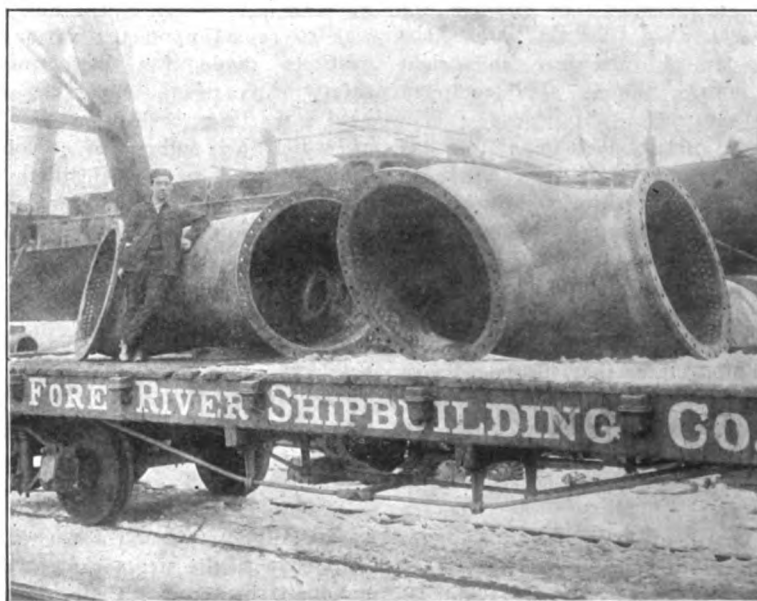
A LAKE ENGINEER.

COPPER PIPES MADE AT FORE RIVER.

As an example of heavy copper pipe work the accompanying illustration is particularly interesting as the pipes shown are of very unusual weight and sizes. The two copper pipes seen in the photograph are the main exhaust pipes of the Curtis Turbine steamship Creole and were made at the copper shop of the Fore River Shipbuilding Co. at Quincy, Mass., the builders of the vessel. Each of these pipes weighs 2,500 lbs. Each pipe is 42 in. in diameter, inside measurement, and 5/6 of an inch in thickness. Each pipe was made from sheet copper in four pieces and the skill used in brazing these pieces together is clearly shown in the smoothness and shapeliness of the pipes, the workmanship on which will quickly appeal to all coppersmiths, who will appreciate that the pipe is nearly, if not quite, the largest size copper pipe made in this country for marine purposes. The Fore River company makes all kinds of copper work and steel piping of any shape or size up to 300 lbs. pressure for power plants, distilleries, breweries, and the like, and with contracts ahead including the building of one of the two great 20,000-ton battleships for the United States navy, to keep the works busy

for three years, will extend this branch of their business and give employment to an additional number of coppersmiths.

The new Fabre line steamship Venezia arrived in New York recently on her maiden trip from Marseilles, Naples and Almeria. On this voyage the Venezia maintained a speed of 15½ knots. The vessel was built at the Neptune works of Swan, Hunter & Wigham Richardson, Newcastle, for Cyprian Fabre & Co., Marseilles. She is 470 ft. long, 51 ft. beam and 33 ft. deep, with accommodations for 71 cabin, and 1,852 steerage passengers.



MAIN EXHAUST PIPES OF THE CURTIS TURBINE STEAMSHIP CREOLE.

ITEMS OF GENERAL INTEREST.

Record time was made in unloading the steamer Francis L. Robbins at Fairport recently. Her cargo of 6,403 tons of iron ore was unloaded into cars by electric grab buckets in four hours and twenty minutes.

A report from Amherstburg states that the sunken schooner Houghton is still on the bottom, no efforts having been made to float the vessel. The wreckers are waiting for an insurance settlement on the cargo of coal. The schooner was not insured.

An announcement from Cardiff, Wales, is to the effect that the navy department has contracted with Welsh firms for 100,000 tons of the best steam coal, the delivery to extend over 1908. The price agreed upon has not been made public.

The new steamer Kotcher, building at the Detroit yard of the American Ship Building Co. for the Detroit Steamship Co. and which will be launched late during the present month, will be brought out by Capt. W. H. Hoffman, at present master of the steamer Choctaw.

The commissioners of accounts of the city of New York, acting under Mayor McLellan, have begun an investigation into the awarding of the Ashokan dam contract No. 3 to McArthur Bros. and the Winston Co., although the bid submitted by the John Pierce Co. was about \$2,000,000 lower than that of the successful bidders. The contract involves about \$12,000,000 and it is asserted that the figures obtained by the engineer of the board show that it would be impossible for the Pierce Co. to carry out the terms of its bid and do good work.

It is calculated that the only supplies, in addition to coal, which the fleet will take on board on the way will be such fresh vegetables as may be procured at the different points where the ships will stop. As it is summer in the South Atlantic in December, January and February, pleasant weather is anticipated.

The city of Tacoma, Wash., is to have a fireboat shortly. The president of the city council is authority for the statement that one will be provided for in the budget for the coming year. Tacoma is at present without protection of this sort and the heart of the business section is endangered.

The name of the ill-fated steamer General Slocum has recently been changed to Maryland. The wreck was purchased in November, 1904, by Frederick Craemer, of Philadelphia, for \$1,800 and converted into a coal barge. In the burning of the Slocum more than 1,000 persons, mostly women and children, lost their lives.

The battleship Vermont was presented with a beautiful silver service at Boston Oct. 6. Each of the pieces of the service is emblematic of the Green Mountain state. The battleship was also the recipient of a flag of its name state as a gift of the Vermont chapter of the D. A. R. and the jackies were remembered by comfort bags from the Vermont W. C. T. U.

The new German second-class cruiser Stettin, when undergoing her trials last week attained a speed of 25.8 knots an hour, which is considerably above the contract requirements. The Stettin is of 3,350 tons displacement, and is 354¼ ft. long and 54½ ft. beam. She was built at the Vulcan Works at Stettin. Her engines are of 13,200 I. H. P., and she mounts ten 4.1-in. guns and eight 2.2-in. guns. She is also equipped with two torpedo tubes.

Corporation Counsel Pendleton has sent to the mayor of New York, an opinion respecting the action of the board of water supply in awarding the Ashokan dam contract to the MacArthur Bros. & Winston Co. when a bid some \$2,000,000 lower had been submitted by the John Pierce Co. The opinion states that the board was entirely within its rights in awarding the contract as it did and that the only recourse available to the city would be for the board to readvertise the contract.

The board of estimate and apportionment of the city of New York at a recent meeting passed a resolution authorizing the issue of corporate stock in the sum of \$10,000,000 to

pay for the acquirement and development of property along the South Brooklyn water front. It is estimated that \$6,000,000 of this amount will be required to pay for the purchase of the property at \$1.10 per square foot. The remainder is to be used in building the massive chain of docks which has been planned for the entire front.

The submarine boat U, the only one in the navy of Germany, has recently undergone a series of maneuvers which resulted most satisfactorily. The under water trials were very successful and the vessel is said to have surpassed all records for similar vessels in other navies for distance of voyage, having traveled 600 nautical miles in the North Sea, during bad weather, without the renewal of her fuel. She is fitted with two petroleum motors, each developing 225 H. P. The greatest distance heretofore traveled by a submarine under similar conditions was 300 miles, accomplished by a French boat.

The fact that the navy lacks sufficient colliers to supply coal for the trip emphasizes the necessity of additional ships of this class and it is probable that Congress will be asked to make an appropriation for building them. At present only two colliers are in progress of building, one at the New York yard, which is 30 per cent completed, and one at Mare Island, which is only 1 per cent finished.

The Panther, fully equipped as a repair ship, will accompany the fleet, as will the water ship Arethusa and the supply ships Glacier and Culgoa. The Glacier will be provisioned with sufficient fresh meat to last the fleet all the way from Hampton Roads to San Francisco.

The committee appointed by the Navigation Conference at its meeting in New York last April, and which was to report upon the various suggestions made for increasing the safety of vessels in navigable waters, held a meeting recently in New York at which a number of resolutions were adopted to be laid before the conference shortly. Of chief interest was the resolution limiting the length of tows in harbors and rivers to 1,500 feet, from the bow of the tug boat to the stem of the last barge or scow in tow, and that the distance between any two adjacent vessels towed shall not exceed twenty-five fathoms, and the distance from the tug to the first tow shall not exceed fifty fathoms.

The steamer Australia towing the barge Polynesia, bound down with ore, collided with the steamer F. B. Squire, upbound, in the St. Clair river near Algonac on Sunday morning. The Australia and Polynesia were pretty

badly damaged, the former having several damaged plates and bent frames. Both vessels will be unloaded at Cleveland and will then be taken to the ship yard for repairs. The Squire was apparently not injured, for she proceeded on her trip. The Australia and Polynesia are owned by Capt. James Corrigan of Cleveland and this is the second accident that they have met with during the present season in the St. Clair river. A few months ago the Australia was sunk by the Bethlehem.

Col. Robert M. Thompson, retired naval officer, yachtsman and financier, of New York, has chartered the steamship Mineola, of the Hogan line, for the purpose of taking a number of his friends on a trip around the world. The Mineola, which is of 8,300 gross registered tons, has been plying between England and Galveston, Tex. She will be fitted out at the yard of Tietjen & Lang, Hoboken, N. J., various conveniences being added that will fit her for a pleasure vessel. The work of making the necessary changes is in the hands of Tams, Lemoine & Crane, naval architects, of New York. The charter price, exclusive of any improvements, is said to be \$500,000, and the guests are to include Lord Charles Beresford and Lord Brassey and his wife, besides about a dozen other friends of the unique host.

Major Graham D. Fitch, government engineer at Duluth, has advised the United States lake survey that a deep channel, 135 ft. wide, has been dredged through the shoals in Superior harbor basin just off the mouth of the Nemedji river and the banks are marked with small red and black spar buoys, black on the south side and red on the north side of the channel. The south edge of the dredged cut passes 85 ft. off the point of shore on the east side of the mouth of the Nemedji river. The dredges are still working on the north side of the channel to further widen it and the buoys will be set back as the width increases. Vessels drawing 21 ft. can now run from the Superior entry up into the Superior front channel, where deep water is 400 ft. wide, by keeping south of the dredges and between the buoys above referred to.

The tug Excelsior of the Great Lakes Towing Co.'s fleet was struck by the steamer Presque Isle in the Detroit river last Saturday, and sunk. The crew had a narrow escape from drowning, but succeeded in reaching shore safely. The tug will be raised.

priority on the sea, but, in giving up, we have the consolation of knowing that there is but one steamer in all the world faster than the Kaiser Wilhelm II of our line. It is better to have held and lost a record than never to have held one."

The Anchor Line steamer *Astoria* is to be withdrawn from regular service between Glasgow and New York at the termination of her present voyage. The *California*, which sailed last Saturday from Glasgow on her maiden voyage, will take her place. The *Astoria* was originally in the New Zealand trade for the Shaw-Savill Co., of London, and was the crack steamer for several years. Her name was then the *Tanui*. She has been in service since 1884.

The old Clyde liner *Yemassee*, which was taken out of the service to make way for a more modern and faster ship, is now a barge and has been chartered to load 2,200 tons of coal at Philadelphia for New England. This is her maiden trip since her transformation.

Vice President Nally, of the Postal Co., has made the announcement that the Havana-New York cable will be in working order in two weeks. "Then, instead of 30 minutes being consumed, it will take three minutes to send a message" he adds.

The new steamship *City of Savannah*, the latest addition to the fleet of the Ocean Steamship Co., of Savannah, sailed on her maiden voyage with eleven bridal couples on the passenger list.

The New York Board of Trade is making efforts to limit the length of long tows with a view to increasing the safety of vessels in navigable waters. It has been recommended that the length of tow shall not exceed 1,500 feet from the bow of the tug-boat to the stem of the last barge or scow in tow; that the distance between any two adjacent vessels towed shall not exceed 25 fathoms, and that the distance from the tug-boat to the first tow shall not exceed 50 fathoms.

A suit has been brought in the United States courts by Captain Lewis, of the British steamer *Craigendoran*, to recover demurrage on a cargo of 2,400 tons of crude asphalt and 1,000 barrels of the refined product brought to Philadelphia from Port of Spain and consigned to the Trinidad Lake Asphalt Co. The demurrage claims are due to delays in discharging the *Craigendoran*.

Experiments are to be made in

landing at Holyhead, Wales, the American mails brought by the steamers bound for Liverpool. It is understood that in the event of the experiments proving successful, Holyhead may be made the port of call instead of Queenstown, Island.

Arrangements have been made to place postal clerks on the Panama railroad steamers plying between New York and Panama, commencing with the first steamer leaving New York in November. It is expected that this innovation will greatly improve the postal facilities of the canal zone, Panama, and points on the west coast of Central and South America, mails for which are now received and dispatched via Panama, and will also facilitate the handling of mail for delivery from New York.

There were seven births aboard the Red Star liner *Kroonland* on her last voyage, the small additions to the passenger list all arriving at port well and husky. The name of the big steamer is singularly appropriate.

Lieut. Davis, who has been looking after the installation of the new wireless telephones on the warships bound for the Pacific, reports results far in excess of the expectations of the electricians. Constant communication was maintained by telephone between the Norfolk navy yard and the cruiser *Virginia*, a distance of five miles, and the cruiser *Tennessee* kept in touch through her ordinary instruments with the navy yard at a distance of twelve miles.

The Austrian steamer *Guilia* arrived at New York with a considerable part of her cargo destroyed through a fire which broke out in No. 2 hold on October 3. The crew fought the flames all day and the fire was extinguished with considerable difficulty. The *Guilia* is owned by the Unione Navigation Co., of Trieste, and was built by Russel & Co., of Glasgow, in 1904. Phelps Bros. & Co. are the New York agents.

Owing to the highly distorted accounts of the incident appearing in some of the New York evening papers, Capt. Cherubini of the *Guilia* gave a brief account of the incident in a letter to the *Times*. He says: "We saw smoke coming out of No. 2 hatch at 5:30 o'clock in the morning and at once began to extinguish it with fire hose manned by the crew, but the great panic of the passengers made them take to the life preservers and fill the lifeboats. When I saw this I insisted upon their getting out of the boats and helping extinguish the fire,

because the lifeboats would have been useless at such a distance from land. The stories in some of the papers that pistols were used is not true, as nobody on board showed either a pistol or revolver. We found the fire and with hard work we were out of all danger and the fire extinguished at 3 o'clock. No one was hurt, there was no subsequent sickness, and nobody lost anything, the reports in some of the papers to the contrary being incorrect."

The distorted accounts mentioned are usually ignored, but occasionally the worm turns.

The Cunard liner *Etruria*, it is reported, will be laid up indefinitely in the near future, and her many regular passengers will miss the comfortable old steamer. The *Etruria* was built 24 years ago, and has been in constant service ever since, but, while she is as staunch as ever and can still make good time between Liverpool and New York, changes and improvements in the service have made her an expensive vessel compared with the liners now in service.

Lieut. Com. C. T. Vogelgesang, navigator of the battleship *Louisiana*, has been selected to command the President's yacht, the *Mayflower*. The selection was made by the president.

A most successful launching took place at Cramp's Yard, Philadelphia, on the 9th, when the Commonwealth, the new steamer built for the New England Steamship Co.'s Fall River Line, left the ways at 3:25 p. m. Miss Kathryn Mellen, youngest daughter of C. S. Mellen, president of the New York, New Haven & Hartford railroad, christened the vessel.

The general dimensions of the Commonwealth are. Length on waterline, 439 ft.; length over all, 456 ft.; breadth of hull molded, 55 ft.; breadth over guards, 96 ft.; depth molded at side at lowest point of sheer, 22 ft. The engine is of the double inclined compound type, with two high pressure cylinders 50 in. diameter, and two low pressure cylinders 96 in. diameter; stroke, 9 ft. 6 in. There are ten boilers, each 15 ft. 6 in. diameter, and 13 ft. 7 in. long, equipped with Morison furnaces. The new steamer will have 430 staterooms and 600 berths, and will be the largest and most finely equipped steamer ever built for service on Long Island Sound.

A special train carried the christening party and guests of the Quintard Iron Works Co. from New York via the Reading railway.

COAL IN FOREIGN BOTTOMS.

Contracts for the transportation of coal for the use of Admiral Evans' fleet of 16 battleships on its journey to Pacific waters have been awarded by the secretary of the navy and will be carried in foreign bottoms. The coal itself, however, will be entirely American, which is the only grain of comfort in the whole miserable transaction. The amount involved is over \$1,200,000 and this should have been earned not only by American coal producers but by American ships. It will require 30 vessels to convey the coal. The fleet of colliers which will precede the squadron, will therefore be twice as much as the squadron itself. The successful bidders were as follows:

West Indies Steamship Company of New York, 7,000 tons at Trinidad, at \$1.74 per ton.

Lind & Co. of New York, 6,000 tons at Rio Janeiro, Brazil, at \$3.40 per ton.

Lind & Co. of New York, 20,000 tons at Punta Arenas, (Sandy Point in the Magellan Straits.) at \$4.90 per ton. The lowest bid submitted for this shipment was by the United States Shipping Company of New York, at \$4.84 per ton, but the Bureau of Equipment considered the bid of Lind & Co. more favorable to the Government, as there were certain conditions in the proposals with which it complied more strictly.

American Transportation Co. of Baltimore, 25,000 tons at Callao, Peru, at \$6.09 per ton. A supplementary bid of \$5.80 made by Lind & Co. came in too late for consideration.

Tweedle Trading Co. of New York, 25,000 tons at Magdalena Bay, Lower California, Mexico, at \$6.50 per ton. A supplementary bid of \$6.30 was declined because it came in too late.

United States Shipping Co. of New York, a second consignment of 10,000 tons to Magdalena Bay at 6.63½.

Lind & Co. of New York, two loads of 2,000 tons each at San Francisco, (Mare Island Navy Yard.) at 6.15 per ton.

The coal, aggregating 133,000 tons, will be delivered to the carriers at tidewater at the following points: Baltimore, Philadelphia, Lambert Point, and Newport News, Va.

Following is the full text of attorney General Bonaparte's report, holding that the government could contract with foreign ships for the movement in hand.

I have the honor to acknowledge the receipt of your letter of Oct. 1. In this you ask my opinion upon the

questions whether the prohibitions of Section 4347, R. S., and the Act of Feb. 17, 1898, (30 Stats., 248), refer to property owned by the government, and whether, under existing laws, coal for the use of the navy may be transported by sea from ports on the Atlantic to ports on the Pacific coast of the United States in vessels of foreign registry, provided it appears, as a matter of fact, that sufficient American vessels to transport such coal cannot be had, or that the charges made by such vessels are excessive and unreasonable. Section 4347 of the United States Revised Statutes, so far as material to the foregoing questions, is as follows:

No merchandise shall be (imported) (transported) under penalty of forfeiture thereof, from one port of the United States to another port of the United States, in a vessel belonging wholly or in part to a subject of any foreign power.

By the Act approved Feb. 17, 1898, (30 Stats., 248), this portion of the above mentioned section was amended so as to read as follows:

That no merchandise shall be transported by water under penalty of forfeiture thereof from one port of the United States to another port of the United States, either directly or via a foreign port, or for any part of the voyage, in any other vessel than a vessel of the United States.

You ask whether the prohibition contained in this statutory provision extends to merchandise which constitutes "property owned by the government." It is a well settled principle of statutory construction that a prohibition of this character does not extend to, or affect, the sovereign, unless its language requires that such a meaning shall be given to it. This rule is thus stated in Bacon's abridgement, title "Prerogative," 3-5: "Where a statute is general and thereby any prerogative, right, title or interest is divested or taken from the king, in such case he shall not be bound unless the statute is made by express words to extend to him." This rule has been fully adopted with respect to the United States, (U. S. vs. Knight, 14 Peters, 301), (U. S. vs. Herron, 20 Wallace, 251). In the last mentioned case the supreme court says it is "The settled rule of construction that the sovereign authority of the country is not bound by the words of a statute, unless named therein." If, therefore, there had been nothing in the language of this statute to indicate whether it was or was not intended to apply to merchandise owned by the United States, the rule of construction, to which I have referred, would require that it be held not to have such application. There is, however, in the statute itself language which, in my opinion, is decisive of this question. Both

Section 4347 and the Act of 1898 prohibit the transportation of merchandise from one domestic port to another in vessels owned by foreigners "under penalty of forfeiture thereof." A forfeiture in such case divests the title of the owner of the property forfeited, and vests this title in the government. If the merchandise subject to forfeiture already belongs to the government, it is obvious that the proceeding would be altogether nugatory and futile. The government would acquire by it title to something which it already owned, and the offender, that is to say, the United States itself, would be in precisely the same position in which it was prior to the infliction of the penalty. Under these circumstances, it seems quite clear to me that, even without a resort to the rule of construction to which I have referred, the provisions of this law must be construed as inapplicable to merchandise owned by the United States. I answer, therefore, your first question in the negative, and advise you that, in my opinion, the provisions of Section 4347, U. S. R. S., and of the Act approved Feb. 17, 1898, do not apply to property owned by the government.

In reply to your second question, I advise you that its subject matter appears to be covered by the Act approved April 28, 1904, (33 Stats., 518). The relevant portion of this statute is as follows:

That vessels of the United States, or belonging to the United States, and no others, shall be employed in the transportation by sea of coal, provisions, fodder, or supplies of any description, purchased pursuant to law, for the use of the Army or Navy, unless the President shall find that the rates of freight charges by said vessels are excessive and unreasonable, in which case contracts shall be made under the law as it now exists: *Provided*, That no greater charges be made by such vessels for transportation of articles for the use of the said Army and Navy than are made by such vessels for transportation of like goods for private parties or companies.

It will be observed that this law makes it the duty of the war and navy departments to employ, in general, vessels of the United States, and no others, for the transportation of coal and other supplies purchased for the use of the army or navy. Of course, if the congress had seen fit by this statute to prohibit the transportation of supplies for the army or navy in foreign vessels absolutely, under all circumstances, without exception, and without regard to the consequences, any and all such shipments would be illegal; but the law provides that if the president shall find "that the rates of freight charges by said vessels are excessive and unreasonable, * * * contracts shall be made under the law as it now exists." It is obvious, therefore, that the statute contemplates the possi-

bility that it may be impracticable to comply with its terms without exposing the government to exorbitant and unreasonable expense, and it is intended, in such event, that even the very strict terms of the prohibition shall not prevent the transportation of articles evidently necessary for the maintenance and efficiency of the national forces. The contingency that there might be no American vessels obtainable at any cost, however great, to transport the articles in question is not expressly covered by the terms of the exception; but, in view of the evident purpose of the statute, which was plainly to encourage the development of American shipping, and the grave consequences which might ensue from a failure to supply the army or navy with fuel, food or munitions of war, we are entitled and, indeed, obliged, in my opinion, to apply in this case the rule that a reasonable construction must be applied to the interpretation of all legislative acts; and, therefore, that when no American vessels can be procured, even by the payment of unreasonable and exorbitant charges, there is the same right to employ other means of transportation which is expressly granted when such vessels can be procured but only at an excessive cost to the government.

It remains to be seen what are the means of transportation open to the navy department, if the president shall determine that the rates of freight charges by American vessels are excessive and unreasonable. The statute says that "contracts shall be made under the law *as it now exists*," that is to say, under the law as it existed prior to April 28, 1904. This language, so far as it affects the navy, would seem to refer to Section 3718, U. S. Revised Statutes, which is as follows in so far as relevant:

All provisions clothing, hemp, and other materials of every name and nature, for the use of the Navy, and the transportation thereof, when time will permit, shall be furnished by contract, by the lowest bidder.

This provision is codified, with a slight change of language, from the Act approved March 2, 1845 (5 Stats., 617), and it would seem to be the only provision of law directly applicable to the transportation of supplies for the navy. It is obvious that nothing in the language of this statute restricts the competition for which it provides to vessels of American ownership, and I, therefore, reach the conclusion that when the president shall find the facts he is required to pass upon by the terms of this statute, the navy department is authorized to procure transportation for coal or other supplies, which it may purchase

for the use of the navy, through a free competition, open to both American and foreign ship owners.

It is to be observed, in this connection, as showing that the preference to be accorded American vessels was not intended to prevent the employment of ships owned by foreigners, in certain contingencies, that this preference is subject to an affirmative condition, namely, that the vessels claiming it must not discriminate against the government in their charges, as these are compared with rates of freight established for private shippers; so that the statute would not be operative at all if the American vessels available for transportation charged less to private shippers for the like service than they did to the government. It seems obvious, therefore, that the preference granted by this statute is to be construed as a privilege to be claimed by American ship owners, which is inoperative if not claimed under the conditions prescribed by the law itself.

With the above qualifications, I answer your second question in the affirmative. I, therefore, advise you that, in my opinion, the prohibitions of section 4347, U. S. R. S., and the act of Feb. 17, 1898, do not refer to property owned by the government, and that, under existing laws, coal for the use of the navy may be transported by sea from ports on the Atlantic to ports on the Pacific coast of the United States in vessels of foreign registry, under the circumstances stated in your letter, if these shall be found by the president.

I remain, sir,

Yours very respectfully,

(Signed) CHARLES J. BONAPARTE,
Attorney General.

DULUTH GRAIN TRADE.

Duluth, Oct. 16.—The grain receipts and shipments for the week ending Oct. 12 are as follows:

	Receipts.	Shipments.
Wheat	3,190,518	1,994,442
Corn	28,359
Oats	159,103	21,921
Rye	51,145	1,147
Barley	619,430	722,163
Flax	479,253	201,831

Answers to Questions for Wheelmen and Watchmen.

MORE VESSEL CONTRACTS.

Two additional orders for new steamers to come out in 1908 have been given to the American Ship Building Co. The first order is for a passenger steamer to be operated between Buffalo and Crystal Beach and was placed by the Crystal Beach Navigation Co. She will have four decks

and will be modern throughout, having accommodations for 3,000 passengers. Her keel will be laid at the Wyandotte ship yard about December 1 and the contract calls for delivery in the spring of 1908.

The second order was given by Charles L. Hutchinson, Cleveland, for a freighter to be 452 ft. over all, 432 ft. keel, 52 ft. beam and 30 ft. deep. She will have triple-expansion engines and Scotch boilers. This steamer will be ready to go into commission at the opening of navigation next spring.

IRON SITUATION.

Although prospective pig iron buyers are making efforts to obtain concessions, the furnace interests are maintaining a strong front, and prices are remaining remarkably firm for the volume of business being transacted. A marked improvement is shown in the demand for steel making iron. The ore movement continues heavy, and the likelihood of much shortage at the end of the season is accordingly being diminished. The steel rail situation is unchanged. Coke is firm, but old material is lifeless.

LAKE SUPERIOR CORPORATION.

The Lake Superior Corporation's annual report for the year ended June 30, 1907, compares as follows:

	1907.	1906.
Int. on investment sec....	\$527,982	\$1,102,044
Miscel. net income	150,029	36,700
Total income	678,011	1,138,744
Comp. outst. 1st mtg. bds. 500,000		452,200
Int. accord. 1st mtg. bds....	37,683
Balance	178,011	648,861
Gen. exp., tax, etc.....	148,381	91,981
Surplus	29,630	556,880

Balance brought forward on June 30, 1906, was \$591,683, which added to surplus for the year, makes total surplus of \$621,313, less 5 per cent paid on income bonds October, 1906, \$150,000, the balance of undivided surplus on June 30, 1907, was \$471,313.

In addition to interest and dividends paid, as stated, the subsidiary companies have reserved \$342,000 from net earnings for the year to increase their working capital.

The Watson-Stillman Co., 25 Dey St., New York, have just put out a catalog devoted to hydraulic pumps. Following the custom of the two preceding catalogs, this catalog is simply an assortment of sheets selected from over 800 pages of the company's printed matter, especially relating to the subject. Many of the pages are new, however, and as it is crowded with invariable data, it would be well for all interested to write for it.

THE SAILORS LOG BOOK

DULUTH SHIP CANAL now has a depth of 30 ft. for the entire 300 ft. width on the prolongation of the channel between the piers and also for an additional width of 30 ft. southward of the line of the southern pier.

ST. MARY'S RIVER—ROUND ISLAND SHOAL.—CHANNEL WIDENED AND BUOYS MOVED.—The channel through Round Island Shoal Cut No. 1, northward of the Middle ground of Pt. aux Chenes, head of St. Mary's river, has been widened to 1,000 ft. with a depth of 23 ft. The black can buoy No. 9 and the black spar buoy No. 7 have been moved 200 ft. southward to mark the southern bank of the channel as improved. The channel through Round Island Shoal Cut No. 2 has been widened to 975 ft. with a depth of 23 ft., and the black gas buoy No. 5 has been moved 175 ft. southward to mark the widened channel.

LAKE MICHIGAN.

STURGEON BAY.—A timber beacon is being constructed at Hill's Pt. This beacon will mark the channel into the bay as well as for going out. It is stated unofficially that it is the intention of the government authorities to establish a light on this structure in the spring, and to discontinue the Dunlap Reef range lights, which have become practically useless since the new channel has been cut out and the establishment by the government of the powerful light on top of the draw bridge besides the gas buoy across the channel from Hill's Pt.

CHICAGO HARBOR.—The channel, 22.8 ft. deep and 1,150 ft. wide, which is being dredged along the eastern breakwater in the outer basin at the mouth of the Chicago river, has been completed for a distance of 5,950 ft. southward from the northern boundary of the basin.

GROSSE POINT LIGHTSHIP—SHOAL LOCATED.—Since the stranding of the steamer J. H. Reed at Grosse Pt. on May 3, 1907, an examination of the locality has been made by the lake survey steamer No. 1, and the survey made by her shows a shoal with 18½ ft. of water over it at the existing stage. Its true bearing from Grosse Pt. is NE by E ¼ E ¼ miles. While there is deeper water farther inshore, the shoal is in the nature of a submerged extension of the point, the mariners should not get too far westward of the regular sailing tracks laid down on the charts in the vicinity.

STURGEON BAY—NEW LIGHT ON BRIDGE.—A fixed white lens lantern light has

been established on a steel tower 10 feet high, recently erected on the top chord of the draw span of the bridge at Sturgeon Bay. The light heretofore exhibited was such a poor one that it could hardly be seen more than a few hundred feet.

NORTH SHORE OF LAKE MICHIGAN.—UNCHARTED SHOALS.—The lake survey steamer Search has located the following shoals along the north shore of Lake Michigan: A boulder reef about 2,500 ft. long and about 1,000 ft. wide, with prevailing depths of 24 ft., extending in a NW and SE direction, and bearing SW true 1½ miles from the mouth of the Brevoort river. On this reef a boulder with 19 ft. of water over it lies 6 miles N W ¾ N from the northwestern point of St. Helena Island and 1¼ miles off shore. A 20-ft. boulder lies ¼ mile farther on the same bearing and 1¾ miles offshore.

A boulder reef with spots having less than 21 feet over them extends about two miles westward from Pt. aux Chenes. On this reef a boulder with 17½ ft. over it lies one mile offshore and five miles NW ¾ N true from the northwestern point of St. Helena Island. Another boulder with 18½ ft. of water over it lies 1½ miles offshore, and 4¾ miles NW ¾ N true from the northwestern point of St. Helena Island. A shoal ledge of rock about 400 ft. in diameter on the 21-ft. contour, and having a least depth of 20 ft. over it, lies in the following bearings: Pt. aux Chenes, N by E true, distant 2¼ miles. St. Helena Island, NW end, NW true, distant 2½ miles.

MANITOU PAYMEN SHOAL—ROCK LOCATED.—While sweeping and sounding for obstructions in the vicinity of the Straits of Mackinac the lake survey steamer Search discovered an uncharted boulder about 10 ft. in diameter, with a least depth of 21 ft. at existing stage, lying in 30 ft. of water, ¾ mile SE ¾ S true from Manitou Paymen Shoal nun buoy. In its exposed position the boulder is a menace to navigation in that locality.

DREDGING IN STURGEON BAY CANAL.—The United States Lake Survey at Detroit has received the following report of soundings and dredging in the Sturgeon Bay and Lake Michigan Ship Canal, under direction of Maj. W. V. Judson, United States Engineer at Milwaukee.

Soundings completed Oct. 1 indicate that a bar 50 ft. wide with a minimum depth of 18.7 ft. has formed

across the channel between the harbor piers at the Lake Michigan end, at a point about 350 ft. inside the pierheads. This bar and the shoal at the mouth of the piers probably will be removed during October.

Dredging is in progress abreast of Hills Point in Sturgeon Bay, where the channel has been widened 200 ft. on the northerly side to a minimum depth of 21 ft. In the vicinity and through the draw of the bridge at the city Sturgeon Bay, the channel has been widened and deepened to 21 ft.

Vessels drawing 19 ft. would probably experience no difficulty in navigating the entire waterway.

STURGEON BAY.—Soundings completed Oct. 1 show that a bar about 50 ft. wide with a least depth of 18.7 ft. has formed across the channel at the lake entrance to the Sturgeon Bay Ship Canal, at a point about 350 ft. inside the outer pier heads. This bar is to be removed this month. According to official information, a vessel drawing 19 ft. should have no trouble in passing through this entire waterway.

LAKE HURON.

ST. CLAIR RIVER—SHOAL REMOVED.—The shoal which had formed in the St. Clair river at the mouth of Black river has been removed, providing a clear depth of 16 ft. into the St. Clair river and into Black river up to the Pere Marquette railroad bridge.

LAKE ST. CLAIR—WRECK REMOVED.—The steamer Linden, which was sunk in the St. Clair river just above Sans Souci wharf, has been raised and removed.

DETROIT RIVER—ROUGE RIVER—DREDGED CHANNEL.—A channel 21 ft. deep, 240 ft. wide at lower end, tapering to 100 ft. wide, 1,300 ft. from the mouth, and continuing with that width to the end of the improvement, has been dredged in the Rouge river. The channel extends from the 21-ft. contour in the Detroit river nearly to the point where the Solvay Process Co.'s tunnel crosses the river.

DETROIT RIVER—WINDMILL PT. RANGE LIGHTS.—The square, pyramidal, wooden, skeleton towers from which the Windmill Pt. range lights have been displayed have been removed and conical steel towers substituted. The fixed red lens-lantern lights have been changed to fixed red reflector lights. The bearing of the range is the same as ever, true NE and NE ¼ E correct magnetic.

LAKE SUPERIOR.

PORT WING (FLAG RIVER).—The governing depth of the channel leading into Port Wing from Lake Superior is 15 ft. with a width of 90 ft. Ves-

sels should pass about 50 ft. from the E. pier to follow the middle line of best water. Private dredging to deepen the channel to the lumber docks is and has been in progress for some time. Fort Wing Harbor, Wis., is situated on the south shore of Lake Superior, about 34 miles east of Duluth; it is on Flag Lake, about 3/4 mile within the entrance to Flag River.

POINT ABBAYE SHOAL, MICH.—The bell and nun buoys marking the northern and southern edges of the Point Abbaye Shoal were withdrawn for the winter on Oct. 12. The stations have been marked by spar buoys of similar color.

GRAND ISLAND HARBOR ENTRANCE—MANHATTAN WRECK GAS BUOY WITHDRAWN FOR THE WINTER.—The gas buoy marking the wreck of the steamer Manhattan in the eastern approach to Grand Island harbor, has been withdrawn for the winter, and marked by a spar buoy of the same color.

ST. MARY'S RIVER—LITTLE MUD LAKE—BUOY MOVED.—On Sept. 15, Little Mud Lake upper buoy No. 14, a red spar, was moved 600 ft. southward of its former position and repositioned in 20 ft. of water to mark the eastern edge of the channel opposite Stribling Pt. gas buoy No. 13.

SHOALS REMOVED AT SUPERIOR HARBOR.—The United States Lake Survey at Detroit reports that dredging of shoals off the mouth of Nemadji river in the Superior harbor basin and front channel has secured at the present time a deep channel past the mouth of the river, 45 ft. wide at the narrowest portion. This least width is confined to a stretch 800 ft. long beginning opposite the mouth of the river and extending thence westerly.

In the harbor basin the north line of deep water is 1,100 ft. north of end of ore dock No. 3 (marked here by small red spar) and 800 ft. from end of ore dock No. 1, measuring out on the line of the docks. Red channel buoy No. 2 marks the edge of deep water at the turn opposite the mouth of Nemadji river. Small temporary buoys, red on starboard and black on port side coming in, define the narrow portion of channel.

The work is in charge of Maj. Graham D. Fitch, United States engineer at Duluth, and will be continued until later in the season. It is also expected to commence deepening the lake approach to Superior entry to 30 ft. during October.

NOTICE TO VESSEL OWNERS AND MASTERS.—It is expected that the dams surrounding the rock cut of the West

Neebish channel will be broken through on or about Oct. 15, allowing the water to flow through the new channel, although it will not be available for navigation this season. The effect of this additional channel will be to lower the level of the water below the Sault locks, and down to Sailors Encampment, the estimated amount of such lowering being three to five inches. Since at this time of year the water level is falling naturally, vessels expecting to pass the St. Marys River after Oct. 15 should load to a draft of not more than 19 ft. 3 in. The actual depth of water at prevailing stage will be announced on bulletin at the St. Marys Falls Canal office as heretofore, and overlaid vessels will be subject to delay and lockage may be refused if this step is considered necessary to avoid possible groundings and obstruction of channels.

DETROIT RIVER—RULES AND REGULATIONS—The following rules and regulations for navigating the lower Detroit river have received the joint approval of the governments of the United States and the Dominion of Canada and are published for the information and guidance of vessels on the great lakes.

RULES AND REGULATIONS.

1. **ADMINISTRATION.**—The lower Detroit river shall be in charge of the officer of the corps of engineers, U. S. Army, detailed for the improvement of the Detroit river by the Secretary of War. His representative at the locality shall be the captain of the patrol boat, who shall receive his orders and instructions from the engineer officer in charge, but in cases of emergency shall have authority to take such steps as may be immediately necessary without waiting for specific instructions from the engineer officer in charge, and shall see to the enforcement of the following rules and regulations:

2. **DEFINITION.**—The lower Detroit river shall include all that portion of the river between the Mamajuda Range lights and Lake Erie.

3. No freight boat bound down shall pass or approach another freight boat bound in the same direction nearer than 1/4 of a mile between Mamajuda Range lights and the lower end of Bois Blanc island.

4. No passenger boat bound down shall pass another boat bound down between the south gas buoy No. 2, Ballard Reef channel, and the head of Bois Blanc island.

5. No vessel, freight or passenger, shall pass another going in the same direction, or in the opposite direction,

in the narrow portion of the channel at Limekiln crossing during the progress of the work of widening the channel at this locality.

6. All vessels, both freight and passenger, bound up or down, when signaled so to do, shall slow down in passing any part of the plant engaged on channel improvements.

7. Three distinct blasts of the steam whistle, when sounded from a patrolling vessel, will indicate that the vessel to which such signal is given is proceeding at too high a rate of speed, and such vessel must immediately moderate her speed accordingly.

8. Three long blasts of the steam whistle followed by two short blasts, when sounded from a patrolling vessel will indicate that the vessel to which such signal is given must stop until further orders from the patrolling vessel.

9. One long blast followed by four short blasts, when sounded from the patrolling vessel, will indicate that the vessel to which such signal is given may proceed on her course.

10. While in the performance of his duties, all orders of the engineer officer or his representative shall be obeyed. Any violation of such orders, and any violation of the above rules and regulations, shall subject the offender to the penalties provided in the law quoted in the first part of these regulations.

11. In the emergency specified in section 20 of the act of congress of March 3, 1899 (in case the channel is blocked by the sinking, grounding or other unavoidable delay of a vessel), the officer in charge, or his representative, in addition to the authority therein given, shall have full power to stop all vessels and direct their anchorage, clear the channel, designate the order in which all vessels shall proceed after the channel is open, and shall do all other things necessary and proper to expedite the passage of vessels.

LAKE ERIE.

BUFFALO HARBOR.—Dredging at the southern end of Buffalo harbor in front of the Lackawanna Steel Co. and the Buffalo & Susquehanna Iron Co., canals is completed and the approach from the south entrance of the harbor to these canals, and the area between them, now has a full depth of 23-ft.

PELEE ISLAND—WRECK OF SCH. ARMENIA.—An examination of the sunken wreck of the schooner Armenia, which lies 3 3/4 miles NW by W true from Pelee Passage light, recently made by the steamer Gen. Williams, shows prevailing depths of 23 and 26

ft. over the wreck, but one small spot was struck having over it only 15½ feet. This shows the wreck still to be a menace to navigation, it being in the track of vessels going from the Detroit river to Pelee Passage, and not lighted. The buoy marking the location is still in position a little northeastward of the wreck.

CLEVELAND HARBOR.—The temporary waterworks crib No. 1, off the eastern breakwater, has been completely removed to a depth of 30 ft. A temporary spar buoy left by the contractors still marks the spot.

COLCHESTER REEF—WRECKS LOCATED.—In the vicinity of Colchester Reef lighthouse, the Lake Survey steamer General Williams recently located the following wrecks and obstructions to navigation:

A lone spar, rising from a depth of 36 feet to within 11 feet of the surface without any wreckage around it, was found 2¼ miles SE by E true from Colchester Reef light. This danger is within ¼ mile of the track of vessels from the Detroit river to Pelee passage southward of the light. It was temporarily marked by a spar buoy carrying a white flag with red center.

A wreck, sunk in 36 ft. of water with a least depth of 23 feet over it, was found two miles NE by E 7½ E true from Colchester Reef light. This danger is close to the track of vessels from the Detroit river to Pelee passage northward of the light. There is ample depth under ordinary conditions, but when the western end of the lake is lowered by westerly gales and a heavy sea is running the locality should be avoided. A spar buoy carrying a white flag with red center was moored to mark the wreck.

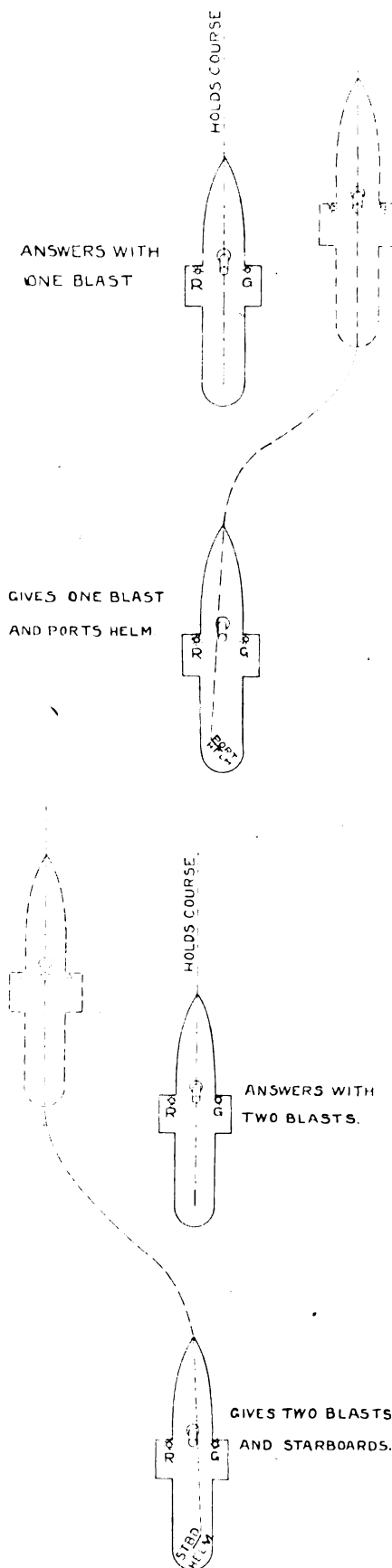
A wreck, supposed to be that of the steamer Grand Traverse, sunk in 33 ft. of water with a least depth of 22 ft. over it, was found 1.1 miles N 58° W true from Colchester Reef light. The wreck is about 300 ft. long, east and west, and lies directly in the path of heavy draft vessels running between the Detroit river and Pelee passage. It is a serious obstruction during low water periods and stormy weather and its position is marked temporarily by a large buoy carrying a white flag with red center and inscription U. S. Lake survey.

The Falls Hollow Staybolt Co., Cuyaboga Falls, O., announce that the fire which destroyed the building in which was housed the rolling mill plant did very little damage to the machinery and the mill is now running in better condition than ever.

ANSWERS TO QUESTIONS FOR WHEELSMEN AND WATCHMEN.

SEVENTEENTH INSTALMENT. PUBLISHED SEPT. 26.

The following illustrations are answers for 189:



The foregoing diagrams graphically illustrate Rule VI of Pilot Rules, which is as follows:

When steamers are running in the same direction, and the pilot of a steamer which is astern shall desire to pass on the right or starboard hand of the steamer ahead, he shall give one short blast of the whistle as a signal of such desire and intention, and shall put his helm to port; or if he shall desire to pass on the left or port side of the steamer ahead, he shall give two short blasts of the whistle as a signal of such desire and intention, and shall put his helm to starboard, and the pilot of the steamer ahead shall answer by the same signals; or if he does not think it safe for the steamer astern to attempt to pass at that point, he shall immediately signify the same by giving several (five or more) short and rapid blasts of the whistle, and under no circumstances shall the steamer astern attempt to pass the steamer ahead until such time as they have reached a point where it can safely be done, when such steamer ahead shall signify her willingness by blowing the proper signals. The boat ahead shall in no case attempt to cross the bow or crowd upon the course of the passing steamer.

190. They are the diagrams illustrating the working system of the red and green side lights and the one and two blasts of a steamer's whistle.

191. WNW.

192. At least five miles.

193. At least two miles.

194. The right hand side of a channel when going in from outside.

195. Pass so as to leave them on my starboard side.

196. A can buoy with a skeleton tower secured on its top and holding a lamp which is automatically fed and kept lighted by mechanism leading into the inside of the buoy which is filled with gas.

197. A steady light, showing always the same.

198. A fixed white light.

199. A fixed red light.

200. One that apparently goes out and then flashes up again.

QUESTIONS FOR WHEELSMEN AND WATCHMEN.

NINETEENTH INSTALMENT.

213. What is the weight of the hand lead?

214. What is an arming?

215. How would you get a sample of the bottom by the use of the lead?

216. How many marks between six fathoms and 11 fathoms?

217. How is 12 fathoms marked on the lead line?

218. What is a lee shore?

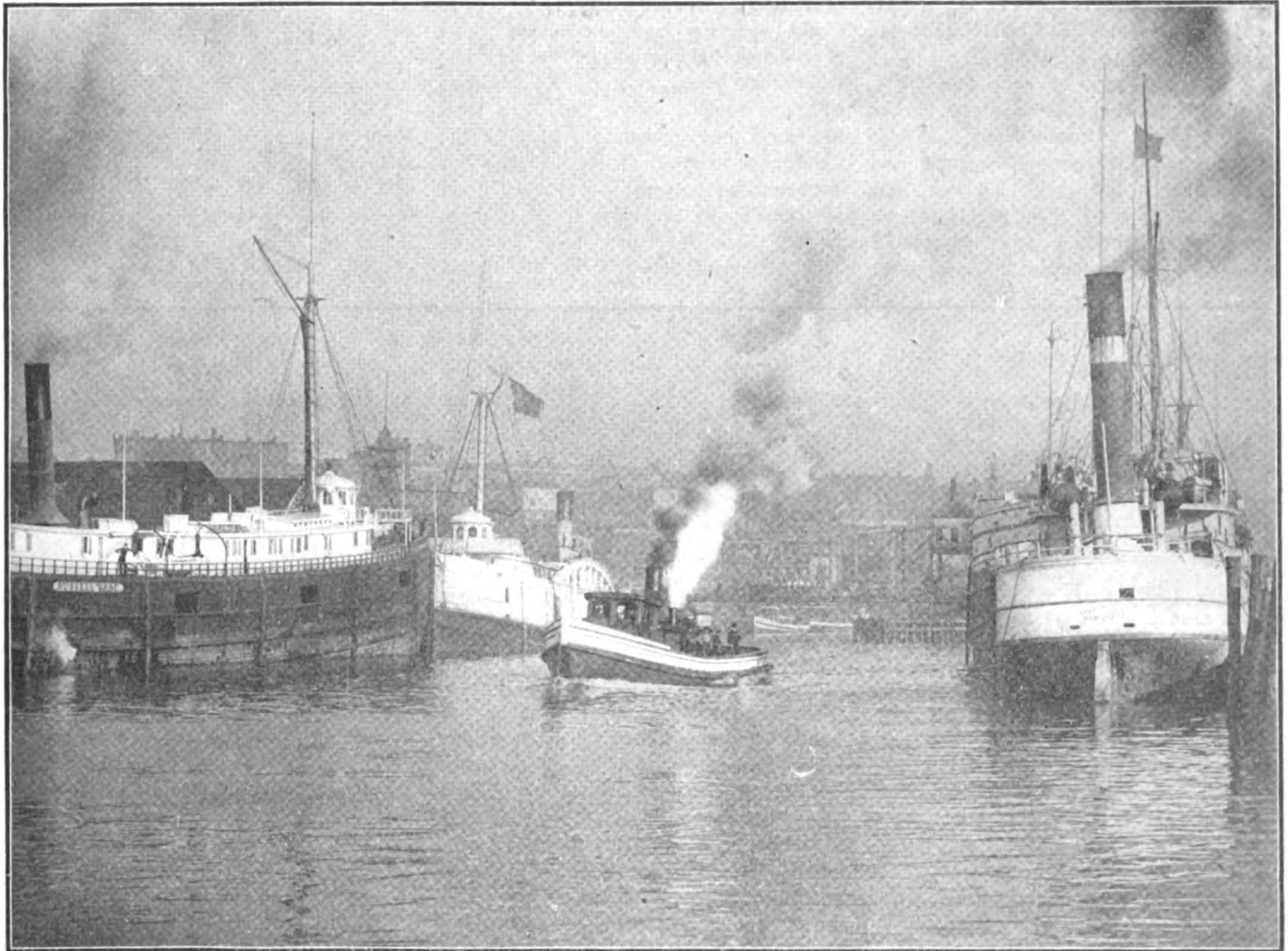
219. On which side of a vessel is the lee side, the port or starboard side?

220. What is the difference between starboard wheel and starboard helm?

221. Name all the lights carried by steamers underway, including towing steamers.

222. What is the fog signal for a steamer at anchor?

223. How many feet from the five-



Published through courtesy Upson-Walton Co.

AN INTERESTING PHOTOGRAPH OF CLEVELAND HARBOR.
This photograph was taken by J. D. Clark, probably in the early 80's, near Main street bridge. There is not a steel steamer in it. The Russell Sage is on the left and the Lake Ontario on the right. J. W. Grover & Sons' ship chandlery is just back of the bridge. They went out of business in 1893.

fathom mark on a lead line to the blue rag?

224. What is a bowline?

QUESTIONS FOR MASTERS AND MATES.—NO. 45.

613. When the wind sets in from points between south and southeast and the barometer falls steadily where will the storm come from?

614. Which way will the wind shift in a case of this kind?

615. When the wind sets in from points between east and northeast and the barometer falls steadily where will the storm come from?

616. Which way will the wind shift?

617. What are the relieving tackles for?

618. You are making 12 miles an hour steering ENE, when a light bears ESE, you run five miles when the same light bears SSE, how far are you from the light at second bearing and what kind of a bearing is this?

619. What is a statute knot?

620. How many feet in a statute knot?

621. What is its measurement based upon and how obtained?

622. Why does a vessel make better weather of it in a heavy sea when she goes slow than when she goes fast?

623. Why is it that a steamer will only consume a small percentage of fuel going at half speed than when at full speed?

624. If it takes two tons of fuel to get 15 miles, how much fuel had it ought to take to get 10 miles?

BIDS FOR REVENUE CUTTER.

Bids were opened at the treasury department, on Sept. 26, under the supervision of the chief of the revenue cutter service, for the construction of a steam vessel known as revenue cutter No. 19, for duty at New Orleans, La., as follows:

Newport News Ship Building and Dry Dock Co., \$49,295; time to complete, June 15, 1908; informal.

Pusey & Jones Co., Wilmington, Del., \$49,500 for hand-steering gear, and \$50,000 for steam-steering gear; time to complete each, six months from date of contract.

It is announced that the Ontario government has purchased from T. Harrington Walker of Walkerville, Ont., his private yacht *Lurline* at a cost of \$10,000, for use in the fishery protection service. It is not known whether the government intends to re-enforce the cruiser *Vigilant* with the *Lurline* which has guarded the Canadian interests on Lake Erie in the past, or whether she will be stationed elsewhere. The *Lurline* was built in 1888 at a cost of about \$20,000, and has been running regularly on the Detroit river during the summer season between Peche Island, Detroit and Walkerville. She will be commanded by Capt. Forrest of Walkerville, Ont., and carries a crew of six men.

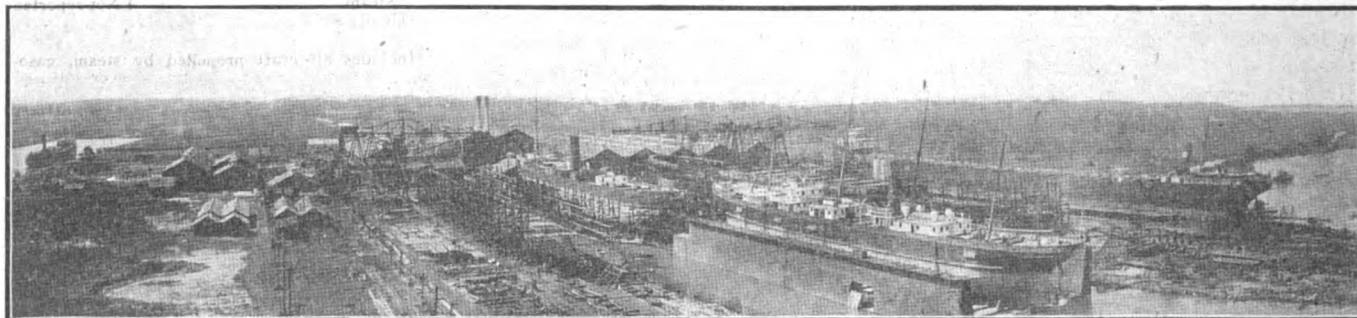
THE ECORSE PLANT OF THE GREAT LAKES ENGINEERING WORKS.

This photograph gives a fine bird's-eye view of the Ecorse plant of the Great Lakes Engineering Works showing the steamers Maryland and Tuscarora in dry dock. To the right of the picture is a large 11,000-ton steamer just finished and practically ready for her departure. On another

remains no reason why any master could wish for anything better. Some prejudiced parties might say: "The lighthouse books give all the bearings of these ranges, etc." Yes, very true, but how many masters will take the trouble to correct these bearings for variation, and even if they did, there is some room for mistakes and plenty of them for they have nothing that will verify their work after they

drographic Office has just issued a new edition of its Sailing Directions for Lakes Erie and Ontario and the St. Lawrence River.

The book has been rewritten in a form to make it attractive, clear and adapted to the use of the mariner, and includes all information pertaining to these waters received and published by that office up to and including Notice to Mariners No. 26,



ECORSE PLANT OF THE GREAT LAKES ENGINEERING WORKS.

berth is the keel of a 10,000-ton steamer; between it and the dry dock is the hull of an 8,000-ton steamer fairly well in frame. To the left of the dry dock is the hull of a 6,000-ton package freighter which has since been launched.

MORE GOOD WORDS FOR THE COURSE FINDER.

Capt. John Tower, master steamer F. T. Heffelfinger, writes: "Concerning Marine Review Course Finder, I must say this much: That in my opinion it is the best and most practical book ever put before the lake mariner. It answers the purpose better than anything else, for a majority of the men on the lakes do not want to be bothered with the study of ascertaining compass deviations and courses by the bearings of celestial bodies. Another thing it is foggy and cloudy about half the time so that azimuths cannot be used, and then many masters are afraid to stop their boats long enough to take azimuths for fear that some other boat will take the dock away from them, etc. The Course Finder will do all this work for them and answers all purposes, and the Deviation Log Book is certainly the very best thing ever put before the lake master. It is the first work of its kind as well as the best. A master can ascertain thereby his compass deviations without losing one minute's time and do it accurately too; and as these river ranges cover nearly all the points of the compass, there

have done it. Therefore, I say again that this work is the best ever put before the steamboat man on the lakes, and no master should be without it. Some may argue that the variations change two minutes per annum, but such objections are ridiculous as it takes 30 years to make a difference of one degree. I gladly endorse the work and trust that it will be received with much favor by all practical men as it justly deserves."

Capt. E. B. Anderson, master S. S. Manitoba, of the Canadian Pacific Railway Co., Owen Sound, Ont.: "Sept. 13. Send me a Marine Review Course Finder on approval, for if it can please an 'old sea dog' like me, it must be good, indeed." On Oct. 13, the captain writes: "I am very much pleased with your Course Finder and it is all you claim for it, and the information in it is as good for the old as the young mariner. It is most practical and useful and answers the purpose admirably."

Capt. John Monaghan, U. S. inspector of hulls, Duluth, Minn.: "Have finished a careful examination of the volume entitled Marine Review Course Finder, and found in it many good things helpful to the old as well as to the young mariner. I trust that it will have a wide circulation, which it certainly merits."

NEW GOVERNMENT SAILING DIRECTIONS.

The MARINE REVIEW desires to call the attention of mariners on the great lakes to the fact that the U. S. Hy-

drographic Office has just issued a new edition of its Sailing Directions for Lakes Erie and Ontario and the St. Lawrence River.

The price of this last book is 60 cents.

The MARINE REVIEW has the agency for all Hydrographic Office publications.

OBITUARIES.

Wm. A. Black, chief engineer on the steamer Muncy of the Anchor line, died on Tuesday of last week in a hospital at Erie, Pa. He was taken ill while coming down at Port Huron and became worse so rapidly that he was taken ashore at Erie. He was fifty-one years old, and was one of the best known engineers on the lakes.

Capt. Wm. Aldred, who has been in command of the car ferry Great Western belonging to the Grand Trunk railway, for fifteen years, died at Windsor last Friday of old age. He had been a sailor practically all his life, but retired from active business about twelve years ago. He was seventy-seven years old.

All bids received by Maj. J. G. Warren for constructing service bridge at Lock No. 1, Big Sandy river, Catlettsburg, Ky., have been rejected and the work will be done by day labor. The amount available was \$7,000. Only two bids were received—Midland Bridge Co., Kansas City, Mo., at \$8,750.30, and McKay & Runyon, Catlettsburg, Ky., at \$8,738.90.

A LINE OF RECORD HOLDERS.

With the splendid performance of the Lusitania on her second west-bound trip, Great Britain regains the blue ribbon of the great Atlantic ferry, and the Cunard Line captures from the North German Lloyd the distinction of possessing the fastest ship in the service.

Not only has the Lusitania established by her time of 4 days 19 hours and 52 minutes the right to the title of a four-day—having made the trip in less than five days—boat, but she has succeeded in breaking all trans-Atlantic records. Her best day's run of 617 knots is 16 knots more than the record formerly held by the Deutschland, of the Hamburg-American Line, which made a run of 601 knots in August, 1901. Her average speed of 24 knots an hour exceeds the former record of 23.58 knots made by the Kaiser Wilhelm II, of the North German Lloyd, in June, 1904. Her trans-Atlantic record this trip beats the record formerly held by the Deutschland, which crossed from Cherbourg to New York in September, 1903, in 5 days 11 hours and 54 minutes. The record for the Queenstown-New York passage, formerly held by the Lucania, of 5 days 7 hours and 23 minutes, was broken by the Lusitania on her maiden voyage of 5 days and 54 minutes.

On the arrival of the Lusitania at New York, the log card issued on the vessel made the total distance covered 2,780 knots, at an average speed of 23.993 knots per hour. The Cunard Co., however, issued a revised card the day after her arrival, making the distance covered 2,781 knots, and the average speed exactly 24 knots per hour. The daily runs, from noon to noon, were as follows: To Sunday noon, 41 miles; to Monday, 590; Tuesday, 608; Wednesday, 617; Thursday, 600; Thursday noon to Sandy Hook Lightship, 324 miles.

The result of the second westbound trip of the big Cunarder is gratifying in that it tends to dispel the feeling of disappointment occasioned by her initial effort; at least, to those who expected a practically untried ship and crew to break all records. Her engineers are more than pleased with her latest performance, and are confident of her ability to still further lower the trans-Atlantic record.

The Cunard Line made a record for the Queenstown-New York route in 1846, when the Europa made the then remarkable time of 11 days 3 hours, beating the former record of the Great Western, made in 1838, of 14½ days.

Their other record holders, in succession, were: The Persia, 1856, 9 days 1 hour, 45 minutes; the Scotia, 1860, 8 days 2 hours 48 minutes; the Etruria, 1888, 6 days 1 hour 55 minutes; the Campania, 1893, 5 days 12 hours 7 minutes; the Lucania, 1894, 5 days, 7 hours 23 minutes.

We can but endorse the words of George Croydon Marks, who, speaking at a meeting of the passengers aboard the Lusitania the evening before her arrival, said: "The Cunard Co. is to be congratulated on its perseverance and indomitable pluck. It is easy to copy, but very difficult to initiate."

WATER-BORNE COMMERCE OF MISSISSIPPI.

The census bureau has compiled the following preliminary total for transportation by water on the rivers of the Mississippi valley. This is taken in conformity with the requirements of the act of congress of March 6, 1902, and covers the calendar year ending December 31, 1906. The statistics represent all American documented and undocumented vessels or craft of five tons and over in operation during any portion of the year, except those engaged exclusively in fishing.

The totals do not agree with the reports of the bureau of navigation because that bureau takes cognizance of documented craft only, some of which had been destroyed, while others were idle during the entire year. A few craft were operated only a portion of the year on the rivers of the Mississippi valley and the statistics for them will be credited to the waters in which they operated for the longest period.

The statistics represent all craft of five tons and over operating on the Mississippi river and its tributaries, chief among which are the Red river, Ouachita, river, Arkansas river, Black river, Ohio river, Tennessee river, Cumberland river, Washash river, Green river, Kanawha river, Monongahela river, Allegheny river, Missouri river, Illinois river and St. Croix river.

	1906	1889.
Number of vessels, total	9,698	*7,300
Unrigged	8,237	6,328
Gross tonnage, total	4,530,276	364,610
*Steam	148,898	192,974
Unrigged	4,381,378	3,171,636
Com'l valuation, total	\$25,545,342	\$14,407,162
*Steam	13,737,060	9,622,608
Unrigged	9,808,282	4,784,554
Gross income, total	\$17,611,555	\$16,331,872
*Steam	15,472,126	Not reported
Unrigged	2,139,429	Not reported
Av. No. employees, total	15,342	15,951
*Steam	14,231	7,111
Unrigged	1,111	8,840
Wages paid, total	\$5,805,807	\$5,337,185
*Steam	5,239,639	Not reported
Unrigged	566,168	Not reported
No. of passengers carried, total	13,691,956	10,858,894
*Steam	13,460,565	Not reported
Unrigged	231,391
Quantity of freight han-		

died, net tons	20,849,602	28,289,503.
*Steam	2,647,580	9,233,598
Unrigged	18,202,022	19,055,905
Horsepower of engines, total	243,934	Not reported
*Steam	213,934	Not reported
Unrigged
Character of construction (No. of vessels)—		
Iron, total	29	Not reported
*Steam	28	Not reported
Unrigged	1	Not reported
Steel, total	92	Not reported
*Steam	53	Not reported
Unrigged	39	Not reported
Wood, total	9,573	Not reported
*Steam	1,376	Not reported
Unrigged	8,197	Not reported
Composite, total	4	Not reported
*Steam	4	Not reported
Unrigged

*Includes all craft propelled by steam, gasoline, electricity or any motive power utilized by machinery.

†The quantity of freight does not include that handled by ferry steamers, lighters and other harbor craft. In 1889 there were 163 ferry steamers reported and the number of tons of freight moved was given as 1,111,906. In 1906 there were 145 ferry steamers reported. Many could not report the number of tons of freight moved as it consisted largely of loaded vehicles. There were, however, 66 ferries for which the quantity of freight was reported aggregating 4,764,608 tons. The number of tons handled by lighters and other harbor craft in 1906 was reported as 4,352,218.

NOTE.—The totals for 1906 include 12 craft operated as parts of railway systems, transferring freight and passenger cars. The income and quantity of freight handled could not be reported for these craft. Their total gross tonnage was 17,025, their commercial valuation \$1,061,395, and they had 227 employees who were paid \$163,106 in wages. The table does not include 178 craft of 15,672 gross tons in 1906 and 138 craft of 17,364 gross tons in 1889 reported as idle during the entire year.

In the designing of the new torpedo-boat destroyers it was provided that they would be able to steam at the rate of 24 knots an hour and to be strong enough in hull and machinery to meet any demand which may be made upon them to maintain that speed in heavy weather, or other adverse conditions, and what is still more important, they are to be fitted to carry enough coal to lengthen their cruising radius to twice that of any of the European vessels of this class, some of which are claiming a speed superior to that announced for the new vessels. The designers point out, however, that the speed of the foreign craft is "on paper," or the result of a fast run, over a measured mile, whereas the 24 knots announced for the new craft for the United States navy will be able to maintain this speed under any service.

The Brown Hoisting Machinery Co., of Cleveland, has just issued a pamphlet descriptive of the Brownhoist locomotive cranes with grab bucket equipment. The pamphlet is copiously illustrated with photographs showing the cranes handling ore from stock piles, gondola cars, etc. The letter press is extremely lucid. There is also incorporated in the book a partial list of the iron and steel companies now using Brownhoist locomotive cranes.

GENERATING SETS.

Abstract of Proposals for furnishing 65 or more 25 k. w. electric generating sets, received in response to advertisement dated August 30, 1907, and opened September 30, 1907, by Major Harry Taylor, Corps of Engineers, U. S. Army.

No. of proposals.	Bidders.	Price per set.
1.	The Otto Gas Engine Works, Philadelphia, Pa.	\$3,400.00
2.	August Metz, New York, N. Y.	3,600.00
3.	The N. Y. Safety Steam Power Co., New York City.	3,618.50
4.	General Electric Co., Schenectady, N. Y.	3,085.00
	Do.	2,700.00

*Alternate proposal.

DREDGING IN SOUTHWEST PASS.

Abstract of proposals for dredging in connection with improving the Southwest Pass, Mississippi river, received in response to advertisement by newspaper and poster and printed specifications dated Aug. 10, 1907, and opened at Engineer's Office, U. S. Army, Customhouse, New Orleans, La., Sept. 10, 1907, by Col. F. H. Ruffner, Corps of Engineers, United States Army:

No.	Names and Addresses of Bidders.	Price per cu. yd. Total	Quantity	Total of bid.
1.	North American Dredging Co., New Orleans, La.	17c.	\$577,320.00	
2.	John Anderson, Gulfport, Miss.	20c.	679,200.00	
3.	Atlantic Gulf & Pacific Co., New York, N. Y.	16c.	543,360.00	
4.	Bowers Southern Dredging Co., Galveston, Tex.	14c.	475,440.00	

*Accepted.

DREDGING IN OHIO RIVER.

Abstract of proposals for dredging and rock excavation at Dam No. 18, Ohio River, received in response to advertisement dated August 26, 1907, and opened at Wheeling, W. Va., on Sept. 24, 1907, by Capt. F. C. Boggs, Corps of Engineers, U. S. A.:

	Common. Per cu yd.	Rock Excavation. Per cu yd.
Monongahela & Western Dredging Co., Pittsburgh, Pa.	\$0.17	\$1.25
The Ohio River Contract Co., Glen Osborne, Pa.	.40	5.00

BIDS FOR NAVAL SUPPLIES.

Bids received at the Bureau of Supplies and Accounts, Navy Department, opened Oct. 1, for material and supplies for the navy yards, contained the following:

Schedule 314.—Yards and Docks.	
Class 160.—Brooklyn—200 ft. Steam Hose.	
L. R. Fletcher Co., 26 Cortlandt St., New York	\$170.00
Class 161.—Brooklyn—260 lbs. Garlock Packing.	
Brooklyn Forge & Supply Co., 21 Franklin St., Brooklyn, N. Y.	\$325.00
Crandall Packing Co., 116 Liberty St., New York	325.00
Double Service Packing Co., 430 Walnut St., Philadelphia, Pa.	239.20
Frue-Phelps Co., 23 Pearl St., Boston, Mass.	221.00
Garlock Packing Co., 136 Liberty St., New York	343.98
Schedule 323.—Supplies and Accounts.	
Class 302.—Boston—31 Dozen Globe Valves.	
R. W. Geldart, 2 Stone St., New York.	\$424.87
Handlan Buck Mfg. Co., St. Louis, Mo.	478.07
Knox & Bro., 96 John St., New York.	425.64
Lunkshimer Co., Cincinnati, O.	555.60
Manhattan Supply Co., 127 Franklin St., New York	527.30
Manning, Maxwell & Moore, 85 Liberty St., New York	436.82
William Powell Co., Cincinnati, O.	516.24
Central Metal & Supply Co., 600 E. Lombard St., Baltimore, Md.	477.00
Class 303.—Brooklyn—15 Dozen Globe Valves.	
R. W. Geldart, 2 Stone St., New York.	\$310.86
Knox & Bro., 96 John St., New York.	311.04
Lunkshimer Co., Cincinnati, O.	261.00
Manhattan Supply Co., 127 Franklin St., New York	345.00
Manning, Maxwell & Moore, 85 Liberty	

St., New York	320.34
William Powell Co., Cincinnati, O.	353.70
Class 304.—Brooklyn—12 Dozen Gate Valves.	
Manhattan Supply Co., 127 Franklin St., New York	\$960.00
Manning, Maxwell & Moore, 85 Liberty St., New York	693.12
William Powell Co., Cincinnati, O.	722.84
Bridgman Bros. Co., 1426 Washington Ave., Philadelphia	522.00
Central Metal & Supply Co., 600 E. Lombard St., Baltimore, Md.	483.00
Class 305.—Brooklyn—Angle, Globe and Check Valves.	
R. W. Geldart, 2 Stone St., New York.	\$2,080.90
Handlan Buck Mfg. Co., St. Louis.	
Mo.	2,518.84
Knox & Bro., 96 John St., New York.	2,081.36
Lunkshimer Co., Cincinnati, O.	2,595.60
Manhattan Supply Co., 127 Franklin St., New York	2,246.82
Manning, Maxwell & Moore, 85 Liberty St., New York	2,033.08
William Powell Co., Cincinnati, O.	2,541.84
Central Metal & Supply Co., 600 E. Lombard St., Baltimore, Md.	2,485.00
Class 306.—Brooklyn—Three Dozen Water Cauge Fittings and 25 Dozen Pet Cocks.	
Lunkshimer Co., Cincinnati, O.	\$273.00
Manhattan Supply Co., 85 Liberty St., New York	101.25
A. B. Sands & Co., 22 Vesey St., New York	103.50
Central Metal & Supply Co., 600 E. Lombard St., Baltimore, Md.	259.00

DREDGING OHIO RIVER.

Bids for dredging and rock excavation at dam No. 18, Ohio river, received by Capt. F. C. Boggs, Corps of Engineers, Wheeling, W. Va., and opened Sept. 24, were as follows:

	Common excavation per cu. yd.	Rock excavation per cu. yd.
Monongahela & Western Dredging Co., Pittsburgh, Pa.	\$0.17	\$1.25
Ohio River Contract Co., Glen Osborne, Pa.	.40	5.00

BIDS FOR BARGES FOR ISTH-MUS.

Bids were opened on Sept. 28 at the office of the Isthmian Canal Commission for furnishing 12 steel barges, as follows:

Fore River Shipbuilding Co., Quincy, Mass., \$395,000; will deliver within 365 days at Colon. Samuel Holmes, 66 Broad St., New York City, will furnish two new steel barges now building and nearly completed for \$70,000; delivery at Delaware river about Dec. 1, 1907. Motley, Green & Co., 66 Broad St., New York City, \$342,000; deliver at Colon one month's, commencing Jan. 1, 1908.

Newport News Shipbuilding & Dry Dock Co., 1 Broadway, New York City, \$276,000; commence delivery at Colon within 213 days and complete within 274 days.

Port Huron Construction Co., Port Huron, Mich., \$486,000; commence shipment within 167 days and complete shipment within 517 days. Maryland Steel Co., 300 Girard Building, Philadelphia, Pa., \$338,000; will start barges to the Isthmus from Sparrow's Point, Md., three in 6 months, six in 8 months, nine in 9 months, and twelve in 10 months; also \$306,000, to make shipment of barges from Sparrow's Point, Md., three in six months, six in seven months, nine in eight months, and twelve in nine months; the following condition is noted in this bid:

"Subject to the condition that partial payments aggregating 90 per cent of contract value be made during progress of work, and should any of the barges be lost in being delivered that no demurrage be charged for ones that would have to be built to replace them."

The Lacey & Jones Co., Wilmington, Del., at Colon \$349,284; commence within 104 days and complete within 312 days.

New York Shipbuilding Co., Camden, N. J., \$348,000; erected and completed at Camden, N. J., commence in 180 days and complete in 365 days; also \$352,000, delivery on dock at Colon, commence in 200 days and complete in 365 days.

CANAL CIRCULAR 391.

Bids received at the office of the purchasing officer of the Isthmian Canal Commission, opened Oct. 5, included the following:

Class 1.—One Launch.	
Electric Launch Co., Bayonne, N. J.	\$2,140.00
Gas Engine & Power Co., and Charles L. Seabury & Co., Morris Heights, N. Y.	2,435.00
Gas Engine & Power Co., Charles L. Seabury & Co., Morris Heights, N. Y.	2,375.00
Lane & De Groot, Long Island City, N. Y.	1,437.00

Motley, Green & Co., 66 Broad St., New York	1,600.00
	2,225.00

Class 5.—1,000 ft. Steam Hose.	
A. J. Barnes, 90 West St., New York	\$900.00
Boston Belting Co., Devonshire St., Boston, Mass.	750.00
New York Belting & Packing Co., 91 Chambers St., New York	364.20
Synagogue Electric Co., 527 W. 34th St., New York	415.00
United & Globe Rubber Mfg. Co.'s, Trenton, N. J.	270.00
Class 45.—Eight Dozen Marine Brushes	\$ 50.00
	168.00

Class 57.—12,500 lbs. Oakum.	
E. S. Banks & Co., 73 Warren St., New York	\$837.50
	827.50
Central Metal & Supply Co., 609 E. Lombard St., Baltimore, Md.	625.00
Cluff & Co., 95 Broad St., New York	687.50
	843.75
	906.25

J. Ross Collins, 84 White St., New York (unit prices)	6.39
	6.69

Lox Bros. Co., 126 Lafayette St., New York	747.50
R. W. Geldart, 2 Stone St., New York	792.50
Manhattan Supply Co., 127 Franklin St., New York	817.50
Manning, Maxwell & Moore, 85 Liberty St., New York	900.00
Motley, Green & Co., 66 Broad St., New York	587.00
	625.00
	675.00
	687.50
	718.75

D. E. Boucher Mfg. Co., 91 Maiden Lane, New York	746.25
O. J. Darrinon, Piquette Co., Norfolk, Va.	761.25
Vermilye & Power, 17 Battery Pl., New York	707.00
Excelsior Equipment Co., Pittsburgh, Pa.	825.00

DREDGING IN STAMFORD HARBOR.

Abstract of proposals for dredging in Stamford Harbor, Conn., received in response to advertisement dated Aug. 8, 1907, and opened Sept. 7, 1907, by Maj. Harry Taylor, Corps of Engineers, U. S. A.:

No. of Proposal.	Names of Bidders.	Dredging.	Rock removal.
1.	Maritime Dredging Co., New York City	.23	\$10.00
2.	Atlantic Dredging Co., New York City	.27 7/10	8.80

*Accepted.

FREIGHT SITUATION.

There is little change to be noted in the general freight situation since last week. The movement of ore is quite heavy and it would not be surprising if the October movement almost equals the September movement. The Pittsburgh Steamship Co. is beginning to place its barges in ordinary, and will operate all the steamers alone after the present month. Line boats have practically withdrawn from the grain trade owing to the great increase in package freight, and grain rates have accordingly been marked up.

CONSTRUCTION AT PERCHES RANGE, MICH.

Following is a list of bids received at the office of the engineer of the eleventh light house district at Detroit, Mich., on Sept. 3 for completing, framing, bolting and leveling of foundation cribs of the Isle aux Perches Range, Mich.:

A. J. Dupuis Co., Detroit, Mich., \$945, accepted.

Cander Lock and Bridge Building Co., Detroit, Mich., \$694.50.

Feed Water Filters, Regulators and Engines

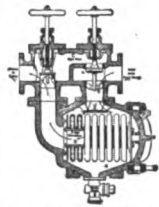
We make Pressure Regulating
Valves for all purposes, steam or water.

Our Feed-Water Filter will keep
oil out of your boiler.

We can interest you if
you use a condenser.

Water Engines for Pumping Organs

THE ROSS VALVE MFG. CO. TROY N.Y.



Keep Oil out of your
Boiler with the
Feed-Water Filter
For Marine and
Land Service. Two
of these Filters are
in use on the Oceanic



Good
Jobbing
Accounts
Desired for
Republic
Mechanical
Rubber
Goods

The Republic Belting and Supply Co.
CLEVELAND, OHIO

Manufacturers
of **LEATHER BELTING**

The Spar Varnish that Lasts



MARINE SPAR

Resists the destructive action of salt or
fresh water, moisture, etc., **BETTER**
than any other make of Spar Varnish in
the market.

It works freely, dries hard and is exceed-
ingly durable.

WRITE for our (free) spindle finished
with Oceana and test for yourself, the
wonderful water-resisting properties of
this specialty.

Standard Varnish Works

THE LARGEST VARNISH WORKS IN THE WORLD

29 Broadway,
NEW YORK
LONDON

BERLIN

2620 Armour Ave.,
CHICAGO
BRUSSELS
Canadian Branch: International Varnish Co., Ltd., Toronto

Geo. L. McCurdy

169 Jackson Boulevard
CHICAGO ILLINOIS

INSURANCE

HULLS and CARGOES

DIRECT REPRESENTATIVE OF LEADING
AMERICAN AND FOREIGN UNDERWRITERS

Fitting Out VESSELS

THAT'S
OUR
TRADE

WE supply everything
that a vessel needs
—and our guarantee goes
with everything we sell.
Let us submit a bid for
fitting out your ship this
spring.

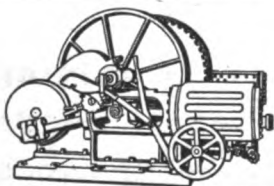
THE UPSON-WALTON CO.

CLEVELAND, O.

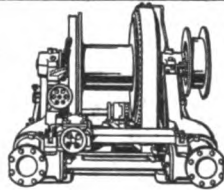
ADVERTISERS

The Star indicates alternate insertions, the Dagger once a month.

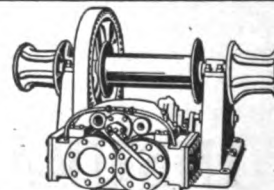
†Akers Steering Gear Co.....	—	Donnelly Salvage & Wrecking Co.	43	*Le Mois Scientifique et Industrial	43	Roelker, H. B.....	50
Almy Water Tube Boiler Co..	37	Douglas, G. L., Jr.....	48	Levine & Co.....	41	†Rogers Steam Oil Separator Co.....	—
American Injector Co.....	13	Drein, Thos., & Son.....	43	Lockwood Mfg. Co.....	50	Root, W. O.....	49
American Line.....	47	Dunbar & Sullivan Dredging Co.	39	Lorain Coal & Dock Co.....	49	Ross Valve Co.....	35
American Sawdust Co.....	38	Elphicke, C. W., & Co.....	48	Lundin, A. P.....	52	Safety Car Heating & Lighting Co.	5
American Ship Building Co..	4	*Emerson Shoe Co.....	2	McCarthy, T. R.....	48	Scherzer Rolling Lift Bridge Co.	43
American Ship Windlass Co..	2	†Empire Shipbuilding Co.....	—	McCurdy, Geo. L.....	35	Schrader's A., Son, Inc.....	50
Armstrong Cork Co.....	52	Falls Hollow Staybolt Co....	41	McKinnon Iron Works.....	41	†Scoville Check Valve Co....	—
*Armstrong Mfg. Co.....	12	Fix's, S., Sons.....	50	MacDonald, Ray G.....	48	†Seneca Chain Co.....	—
†Ashton Valve Co.....	—	Fletcher, W. & A., Co.....	41	Mallory Line.....	47	Shaw, Warren, Cady & Oakes	48
†Atlantic Works, Inc.....	—	Fogg, M. W.....	50	*Marine Iron Co.....	9	*Shelby Steel Tube Co.....	11
Atlantic Works.....	41	Fore River Ship Building Co.	41	†Marine Iron Works.....	—	Sheriff Steel Co.....	43
Babcock & Penton.....	49	Furstenau, M. C.....	49	Marshall, Alexander.....	48	Shipping World Year Book..	51
Baker, Howard H., & Co....	52	General Electric Co.....	52	Martin-Barriss Co.....	43	Siggers & Siggers.....	38
Belcher, Fred P.....	48	Gilchrist, Albert J.....	48	Maryland Steel Co.....	10	Smith Coal & Dock Co., Stanley B.	3
Boland, J. J.....	48	†Goldschmidt Thermit Co....	—	Mehl, Edward.....	48	Smooth-On Mfg. Co.....	51
*Boston & Lockport Block Co.	12	Goulder, Holding & Masten..	49	Milwaukee Dry Dock Co....	5	†Spence Mfg. Co.....	—
†Boucher Mfg. Co., The H. E.	—	Great Lakes Dredge & Dock Co.	39	Mitchell & Co.....	48	Spencer, H. R.....	48
Bowers, L. M., & Co.....	41	Great Lakes Engineering Wks.	14	Morse, A. J., & Son.....	47	Standard Varnish Works....	35
Breyman, H., & Bros.....	39	Great Lakes Register.....	9	Nacey & Hynd.....	49	Starke, C. H., Dredge & Dock Co.	39
Briggs, Marvin.....	38	†Great Lakes Towing Co....	11	†New Bedford Boiler & Machine Co.	—	†Steel Mill Packing Co.....	—
Brown & Co.....	48	†Griscom-Spencer Co.	—	Newport News Ship Building & Dry Dock Co.	6	Stratford, Geo., Oakum Co..	43
†Brown Hoisting Machinery Co.	—	Hall, John B.....	48	New York Shipbuilding Co..	7	Submarine Signal Company..	9
Buffalo Dredging Co.....	39	Hanna, M. A., & Co.....	41	†Nicholson Ship Log Co....	—	Sullivan, M.	39
Buffalo Dry Dock Co.....	5	Hawgood, W. A., & Co.....	48	†Northern Ship Log Co.....	—	Sullivan, D.	48
†Buffalo Ship Chandlery & Supply Co.	—	Helm, D. T., & Co.....	48	Northern Dredge Co.....	39	†Superior Iron Works.....	—
Bunker, E. A.....	52	Holmes, Samuel.....	48	Northwestern Steam Boiler & Mfg. Co.	37	Superior Ship Building Co..	4
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Cleveland & Buffalo Transit Co.	47	Hutchinson & Co.....	48	Otis Steel Co.....	11	Toledo Ship Building Co....	5
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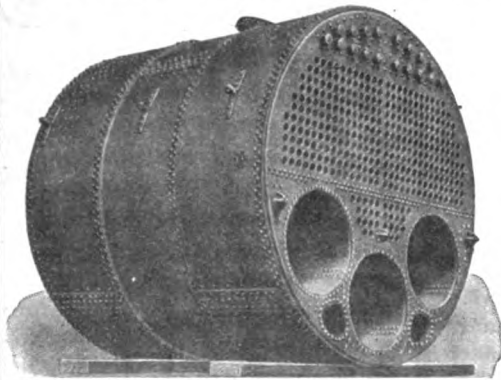


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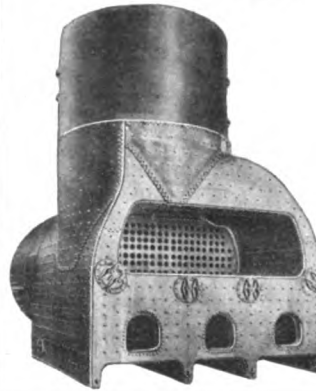
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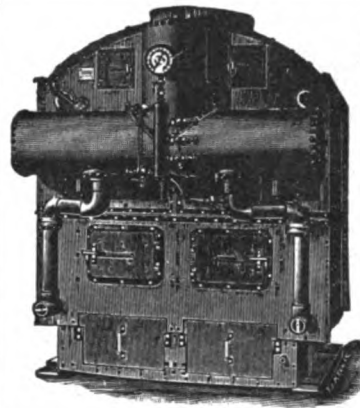
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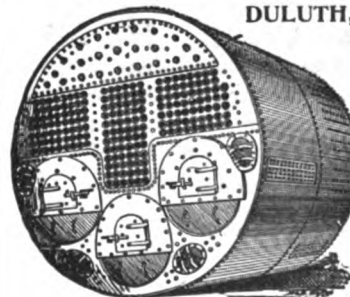
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